

## CLAIMS:

1. An electrophoretic display panel, for displaying a picture, comprising:

- an electrophoretic medium comprising charged particles;
- a plurality of picture elements;
- a first and a second electrode associated with each picture element for receiving a
- 5 potential difference; and
- drive means,

the charged particles being able to occupy extreme positions near the electrodes and intermediate positions in between the electrodes,

the drive means being arranged for controlling the potential difference of each picture

10 element

- to be a preset potential difference having a sequence of preset values of alternating sign and having a predetermined duration, each preset value having a sub-duration to represent an energy sufficient to release particles present in one of said extreme positions from their position but insufficient to enable particles to reach the other one
- 15 of the extreme positions, and subsequently
- to be a picture potential difference having a value and an actual duration in the range between a smallest duration and a largest duration, for displaying the picture by bringing the particles into one of said positions,

characterized in that

20 the drive means are further arranged for controlling for each picture element of at least a number of the picture elements having smaller durations of the picture potential differences than the largest duration, the preset potential difference to have an additional duration, which is chosen in a range from larger than zero to equal to a difference between the largest duration and the actual duration of the picture potential difference.

25 2. A display panel as claimed in claim 1 characterized in that the drive means are further arranged for controlling the respective additional duration to be a decreasing function of the respective actual duration of the picture potential difference.

3. A display panel as claimed in claim 2 characterized in that the drive means are further arranged for controlling the respective additional duration to be substantially equal to the difference between the largest duration of the picture potential differences and the respective actual duration of the picture potential difference.

5

4. A display panel as claimed in claim 1 characterized in that the drive means are further arranged for controlling the preset values in the sequence to be subsequently of opposite value.

10

5. A display panel as claimed in claim 4 characterized in that the drive means are further arranged for generating an even number of preset values.

15

6. A display panel as claimed in claim 1 characterized in that the picture elements are interconnected in two or more groups whereby preset potential differences having a different polarity are supplied to different groups.

20

7. A display panel as claimed in claim 1 characterized in that for each picture element the first electrode comprises a data electrode and the second electrode comprises a selection electrode and the drive means further comprise first sub drive means for applying a selection potential to the selection electrode and second sub drive means for applying a data potential to the data electrode.

25

8. A display panel as claimed in claim 1 characterized in that the first electrode of each picture element is being coupled to a data electrode via a switching element, the switching element being controlled by a selection electrode, and the drive means further comprise first sub drive means for applying selection potentials to the selection electrodes and second sub drive means for applying data potentials to the data electrodes.

30

9. A display panel as claimed in claim 7 or 8 characterized in that the selection electrodes or the data electrodes or both associated with picture elements are interconnected in two groups, and the drive means are further arranged for generating a first preset potential difference having a first polarity to the first group and a second preset potential difference having a second polarity opposite to the first polarity to the second group.

10. A display panel as claimed in claim 1, 2 or 3 characterized in that each picture element having a duration of the actual picture potential difference smaller than the largest duration of the picture potential differences, is one of the number of the picture elements.